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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 7631.7-2025

Replacing GB/T 7631.7-1995

**Lubricants, industrial oils and related products(class L) of
classification - Part 7: Family C (gear systems)**

润滑剂、工业用油和有关产品（L类）的分类 第7部分：C组（齿轮）

(English Translation)

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Table of Contents

Foreword
Introduction
1 Scope
2 Normative references
3 Terms and Definitions
4 Explanation of the codes used
5 Detailed Classification

Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is Part 7 of GB/T 7631, "Classification of Lubricants, Industrial Oils and Related Products (Class L)". GB/T 7631 has been...

The following sections were published.

- Part 1: Overall Grouping;
- Part 2: Group H (Hydraulic System);
- Part 4: Group F (Spindle, Bearings and Related Clutches);
- Part 5: Group M (Metalworking);
- Part 6: Group R (Temporary protection against corrosion);
- Part 7: Group C (Gears);
- Part 8: Group X (Grease);
- Part 9: Group D (Compressors);
- Part 10: Group T (Turbines);
- Part 11: Group G (Guide Rails);
- Part 12: Group Q (Organic Heat Transfer Fluid);
- Part 13: Group A (Total Loss Systems);
- Part 14: Group U (Heat Treatment);

---Part 15: Group N (Insulating Liquid);

---Part 16: Group P (Pneumatic Tools);

---Part 17: Group E (Internal Combustion Engine Oils);

---Part 18: Group Y (Other Applications) this document supersedes GB/T 7631.7-1995 "Classification of Lubricants and Related Products (Class L) Part 7: Group C (Gears)" and is consistent with...

Compared with GB/T 7631.7-1995, apart from structural adjustments and editorial changes, the main technical changes are as follows.

a) The product category L-CKSMP, an anti-micropitting gear lubricant, has been added (see Table 1);

b) Change the synthetic gear lubricant product category to four categories, including L-CSPG, L-CSPR, L-CTPG, and L-CTPR. (Delete) in addition to the L-CKS and L-CKT categories (see Table 1, 1995 edition);

c) Four new categories of biodegradable and/or low-biotoxic gear lubricants have been added, including L-CKTG, L-CKES, L-CKPG and L-CKPR (see Table 1).

This document is modified to adopt ISO 6743-6:2018 "Lubricants, industrial oils and related products (Class L) - Classification - Part 6: Group C".

(gear)".

The technical differences between this document and ISO 6743-6:2018, and the reasons therefor, are as follows.

---ISO 3448:1992 has been replaced with the normatively referenced GB/T 3141-1994 to suit my country's national conditions.

The following editorial changes have been made to this document.

---The standard name has been changed to "Classification of Lubricants, Industrial Oils and Related Products (Class L) Part 7: Group C (Gears)";

---ISO 6743-99:2002 has been replaced by GB/T 7631.1-2008 (see Chapter 1) for informational purposes;

---ISO 6743-9:1987 has been replaced by GB/T 7631.8-1990 (see Table 1);

---ISO 6743-1:2002 has been replaced by GB/T 7631.13-2012 (see References);

---ISO 12925-1:2024 has been added to the references.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed and is under the jurisdiction of the National Technical Committee on Standardization of Petroleum Products and Lubricants (SAC/TC280).

Introduction

GB/T 7631, "Classification of Lubricants, Industrial Oils and Related Products (Class L)," aims to establish the classification of lubricant products and support the classification of various lubricant products.

The formulation of standards for lubricant products is planned to consist of seventeen parts.

---Part 1: General Grouping. The purpose is to establish the classification principles for lubricants, industrial oils and related products (Class L).

---Part 2: Group H (Hydraulic Systems). The purpose is to establish a detailed classification of Group H.

---Part 3: Group F (Spindles, Bearings, and Related Clutches). The purpose is to establish a detailed classification of Group F.

---Part 4: Group M (Metalworking). The purpose is to establish a detailed classification of Group M.

---Part 6: Group R (Temporary Protection against Corrosion). The purpose is to establish a detailed classification of Group R.

---Part 7: Group C (Gears). The purpose is to establish a detailed classification of Group C.

---Part 8: Group X (Lubricating Grease). The purpose is to establish a detailed classification of Group X.

---Part 9: Group D (Compressors). The purpose is to establish a detailed classification of Group D.

---Part 10: Group T (Turbines). The purpose is to establish a detailed classification of Group T.

---Part 11: Group G (Guide Rails). The purpose is to establish a detailed classification of Group G.

---Part 12: Group Q (Organic Heat Transfer Fluids). The purpose is to establish a detailed classification of Group Q.

---Part 13: Group A (Total Loss Systems). The purpose is to establish a detailed classification of Group A.

---Part 14: Group U (Heat Treatment). The purpose is to establish a detailed classification of Group U.

---Part 15: Group N (Insulating Fluids). The purpose is to establish a detailed classification

of Group N.

---Part 16: Group P (Pneumatic Tools). The purpose is to establish a detailed classification of Group P.

---Part 17: Group E (Internal Combustion Engine Oils). The purpose is to establish a detailed classification of Group E.

---Part 18: Group Y (Other Applications). The purpose is to establish a detailed classification of Group Y.

Classification of Lubricants, Industrial Oils and Related Products (Class L) Part 7: Group C (Gears)

1 Scope

This document specifies the detailed classification of Group C (gear) products within Category L (lubricants, industrial oils, and related products). When using this document it needs to be understood in conjunction with GB/T 7631.1.

This document applies to the classification of industrial gear lubricants, but does not include the classification of vehicle gear lubricants.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 3141 Industrial liquid lubricants - ISO viscosity classification (GB/T 3141-1994, ISO 3448:1992, IDT)

3 Terms and Definitions

This document does not contain any terms or definitions that need to be defined.

4 Explanation of the codes used

4.1

The detailed classification of Group C is determined based on the product variety required for the main applications of industrial gears, and according to the composition of the products.